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THE

MINING WORLD INDEX

of Current Literature

VOL. VI LAST HALF YEAR 1914

By GEO. E. SISLEY
Associate Editor
Mining and Engineering World

An International Bibliography of Mining and the Mining Sciences ***Compiled and*** *Revised Semi-Annually from the Index of the World's Current* ***Literature*** *Appearing Weekly in "Mining and Engineering World"*

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Preface

As in previous volumes of The Mining World Index of Current Literature, the world's literature on mining, metallurgy and kindred subjects is covered in Volume VI.

In this index will be found in classified form all articles appearing in periodical magazines published in America, Europe, Africa and Australia on mining, engineering, metallurgy, mining geology, mineralogy, etc.; also the valuable publications of the world's mineral industries, institutes and affiliated engineering and technical societies, as well as publications of the Federal and State Geological Surveys and Mining Bureaus at home and abroad—not to mention new books. All these are indexed by a simple plan, easily understood. By the system of cross-indexing adopted one can readily find what is wanted on any mining or affiliated subject.

In this volume it will be noted that in nearly all entries a brief digest is given, an added feature that will no doubt be fully appreciated.

Where there is more than one author the first named appears in the alphabetical arrangement; the other or others will be found by referring to the author's index.

In the search for some particular article covering a certain subject, it should be remembered that where reference of any importance is made in that article to more than one subject, the article will also be indexed under that subject as well. This reference may be but a few lines in length, but these lines may contain the information sought.

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Acetylene Journal.
African World.
Alaska & Northwest Mining Journal.
Allgemeine österreichische Chemiker und Techniker-Zeitung.
Allianza, Mexico.
American Ceramic Society.
American Chemical Society.
American Electrochemical Society.
American Fertilizer.
American Foundrymen's Association.
American Industries.
American Institute of Chemical Engineers.
American Institute of Electrical Engineers.
American Institute of Mining Engineers.
American Iron & Steel Institute.
American Journal of Science.
American Metal Society.
American Metallurgical Society.
American Mining Congress.
American Museum of Safety.
American Peat Society.
American Railway Engineering Association.
American Society of Civil Engineers.
American Society of Engineering Contractors.
American Society of Mechanical Engineers.
American Society of Naval Engineers.
American Wood Preservers' Association.
Anales de la Sociedad Cientifica Argentina.
Annales de Mines, France.
Annales des Mines de Belgique, Belgium.
American Portland Cement Manufacturers.
Association of Engineering Societies.
Association of Mining Electrical Engineers, England.
Association of Railway Electrical Engineers.
Australian Coal & Iron Trade Review, Sydney.
Australasian Institute of Mining Engineers.
Australian Mining Standard, Melbourne.

B

Berg und Hüttenmännische Rundschau, Kattowitz, Germany.
Berg & Hüttenm, Jahrb. Leoben-Pribram.
Bergbau, Germany.
Bergwerks-Zeitung, Germany.
Bergwerkschaftliche Mitteilungen, Germany.
Bergwirtschaftliche, Mitteilungen.
Birmingham Metallurgical Society, England.
Bitumen, Germany.
Black Diamond.
Braunkohle.
Brick & Clay Record.
British Columbia Bureau of Mines.
British Columbia Mining Exchange & Engineering News, B. C.
British Columbia Mining & Engineering Record, B. C.
British Guiana Institute of Mines and Forests.
British Iron & Steel Institute.
Bulletin of the Pan-American Union.

C

Cairo Scientific Society.
California Miners' Association.
California State Mining Bureau.
Canada Department of Mines.
Canada Geological Survey.
Canadian Engineer.
Canadian Mining Institute.
Canadian Mining Journal.
Cassier's Magazine.
Cement.
Cement Age.
Centralblatt der Hütten & Walzwerke, Berlin, Germany.
Chemical Engineer.
Chemical, Metallurgical & Mining Society of South Africa.
Chemiker-Zeitung, Germany.
Chemiker & Techniker-Zeitung, Austria.
Chemist-Analyst.
Cleveland Engineering Society.
Coal Age.
Coal Mining Institute of America.
Coal Trade Bulletin.
Coal & Coke Operator.
Colliery Engineer.
Colliery Guardian, London.
Colorado School of Mines.
Colorado Scientific Society.
Colorado State Bureau of Mines.
Colorado University.
Columbia School of Mines Quarterly.
Compressed Air Magazine.
Connecticut State Geological & Natural History Survey.
Cornwall Mining Association and Institute, England.
Cuerpo de Ingenieros de Minas del Peru, Peru.

D

Der Bergbau, Germany.
Der Erzbergbau, Germany.
Der Kohleninteressent, Bohemia.
Deutsche Bergwerks Zeitung, Germany.
Deutsche Technik, Germany.
Die Fördertechnik, Germany.
Domestic Engineering.

E

Economic Geology.
Edinburgh Geological Society, Scotland.
Eisen Zeitung, Germany.
El Economista Mexicana, Mexico.
El Petrolero Mexicana, Mexico.
Electrical Engineer, London.
Electrical Review, London.
Electrical Review & Western Electrician.
Electrician, London.
Electrotechnik & Maschinenbau, Austria.
Elektroschemische Zeitschrift, Germany.
Engineering Association of New South Wales, Australia.
Engineering, London.
Engineering Magazine.
Engineering Review, London.
Engineering & Contracting.
Engineering & Mining Journal.
Engineers' Club.
Engineers' Society of Eastern Pennsylvania.
Engineers' Society of Western Pennsylvania.
English Ceramic Society, England.
Excavating Engineer.

F

Faraday Society, London.
Federated Malay States Mines Report.
Fer et Acier, France.

Ferrum, Aachen, Germany.
Florida State Geological Survey.
Fördertechnik, Germany.
Franklin Institute.
Fuel Oil Journal.

G

General Electric Review.
Geological Society of America.
Geological Society of South Africa.
Geological Society of Tokyo, Japan.
Geological Society of Washington, D. C.
Georgia Geological Survey.
Giesserei Zeitung, Germany.
Glückauf, Germany.
Great Britain Geological Survey.

I

Idaho State Inspector of Mines.
Ideal Power.
Illinois State Geological Survey.
Illuminating Engineering Society.
Imperial Institute.
India Geological Survey.
India Mining & Geological Institute.
Indian & Eastern Engineer.
Indiana Department of Geology & Natural Resources.
Indust. Chimica, Minerar. e Metallurg., Italy.
Industrial Advocate, Nova Scotia.
Industrial Engineering & Engineering Digest.
Informaciones y Memorias, Boletin de la Sociedad de Ingenieros, Peru.
Informes y Memorias del Instituto Mexicana, de Mines of Metalurgia, Mexico.
Ingeneria, Spain.
Institute of Engineers & Ship Builders, Scotland.
Institute of Marine Engineers, England.
Institution of Mining Engineers, London.
Institution of Mining & Metallurgy, London.
International Association for Testing Materials.
International Congress for Radiology & Electrology.
International Railway Fuel Association.
International Institute of Technical Bibliography.
Iowa Engineer.
Iowa Geological Survey.
Iowa State College Engineering Experiment Station.
Iowa University.
Iron Age.
Iron Trade Review.
Iron & Coal Trades Review, London.
Iron & Steel Institute, London.

J

Jern Kontorets Annaler, Sweden.
Journal du Four Electrique et de l'Electrolyse, France.
Journal du Petrole, France.
Journal of Electricity, Power & Gas.
Journal of Geology.
Journal of Industrial & Engineering Chemistry.

K

Kali, Erz & Kohle, Germany.
Kali, Halle, Germany.
Kansas University Geological Survey.
Kentucky Geological Survey.
Kentucky Mining Institute.
Kentucky University.
Kohle & Erz, Germany.
Kohleninteressent, Germany.

L

La Metallurgia Italiana, Italy.
La Metallurgie du Nord, France.
Lackawanna Chemical Society.
Lake Superior Mining Institute.
L'Echo des Mines de la Metallurgie, Paris, France.
Le Pétrole, France.
Le Phosphate, France.
Levant Trade Review, Turkey.
Liverpool Geological Association, England.
Los Angeles Chamber of Mines & Oil.
Louisiana Geological Survey.
L'Opinion Financiere, France.

M

Madrid Cientifico, Spain.
Malayan Tin & Rubber Journal, F. M. S.
Manchester Association of Engineers, England.
Manchester Mining & Geological Society, England.
Mechanical World, England.
Metall und Erz, Halle, Germany.
Metallurgia Italiana, Italy.
Metallurgical & Chemical Engineering.
Metallurgie & Construction Mechanique, France.
Metallurgie, Germany.
Mexican Institute of Mining & Metallurgy, Mexico.
Mexican Mining Journal.
Michigan Geological Survey.
Midland Institute of Mining, Civil & Mechanical Engineers, England.
Mineral Resources of Oregon.
Mining Engineering, London.
Mining Engineering & Electrical Record, B. C.
Mining Institute of Scotland.
Mining Journal, London.
Mining Magazine, London.
Mining Science.
Mining Society of Nova Scotia.
Mining World & Engineering Record, London.
Mining & Engineering Review, Australia.
Mining & Engineering World.
Mining & Geological Institute of India.
Mining & Metallurgical Society of America.
Mining & Scientific Press.
Minnesota Geological & Natural History Survey.
Mississippi Geological Survey.
Missouri Bureau of Geology and Mines.
Missouri Geological Survey.
Missouri School of Mines.
Mois Minier et Metallurgique, France.
Montan-Zeitung für Oesterreich-Ungarn und die Balkanländer, Austria.
Montana Inspector of Mines' Reports.
Montanistische Rundschau, Germany.

N

National Academy of Sciences.
National Association of Colliery Managers, London.
National Association of Stationary Engineers.
National Geographic Magazine.
National Lime Manufacturers' Association.
Natural Gas Journal.
Nevada University.
New Jersey Geological Survey.
New South Wales Engineering Association.
New Zealand Geological Survey.
New Zealand Institute.
North Carolina Geological Survey.
North of England Institute of Mining & Mechanical Engineers.
North Staffordshire Institute of Mining & Mechanical Engineers.
Northwest Mining & Metallurgy.
Nova Scotia Mining Society.

O

Oesterreichische Zeischrift für Berg- und Huttenwesen, Vienna.

Oil Age.
Oil & Gas Journal.
Oklahoma Geological Survey.
Ontario Bureau of Mines.
Oregon University.

P

Pahasapa Quarterly.
Pan American Union.
Pennsylvania Mines Department.
Pennsylvania Topographic & Geologic Survey.
Peru Today, Lima.
Pétrole, France.
Petroleum, Germany.
Petroleum World, London.
Pfalz-Saarbrücker Bezirksvereins Deutscher Ingenieure, Germany.
Philadelphia Engineers' Club.
Philippine Journal of Science, Manila.
Pittsburgh University.
Popular Mechanics.
Power.
Practical Electricity & Engineering.
Practical Engineer.

Q

Quebec Bureau of Mines.
Quebec Department of Colonization, Mines & Fisheries.
Queensland Geological Survey.
Queensland Government Mining Journal.

R

Radium.
Rassegna Mineraria Metallurgica e Chimica, Italy.
Resoconti delle Riunioni Association, Italy.
Resources of Tennessee.
Revista Minera e Industria de Linares, Spain.
Revista Minera Metallurgica y de Ingenieria, Spain.
Revue d'Electrochimie et d'Electrometallurgie, France.
Revue Noire, France.
Revue Practique des Industries Metallurgiques, France.
Revue Industrielle du Centre, France.
Revue de Metallurgie, France.
Revue des Matériaux de Construction, France.
Rhodesia (Southern) Mines Department.
Rhodesian Chamber of Mines, Bulawayo.
Rigasche Industrie Zeitung, Russia.
Rock Products.
Royal Geological Society of Cornwall, England.
Royal Society of Arts Journal, London.

S

Salt Lake Mining Review.
Science & Art of Mining, England.
Sibley Journal of Engineering.
Slate Trade Gazette, England.
Smithsonian Institution.
Société Amicale des Anciens Éléves de l'École des Maîtres-Mineurs de Douai, France.
Société Chimique de Belgique, Belgium.
Société des Ingénieurs Civils de France.
Society of Arts, London.
Society of the Chemical Industry, London.
Society of the Chemical Industry.
South Africa Engineering, London.
South Africa, South Africa.
South African Association of Engineers.
South African Institute of Electrical Engineers.
South African Mining Journal.
South Dakota Engineering Society.
South Dakota Inspector of Mines.
South Dakota School of Mines.
South Staffordshire & Warwickshire Institute of Mining Engineers, England.
South Wales Institute of Engineers, Wales.
Staffordshire Iron & Steel Institute, England.
Stahl und Eisen, Germany.
Stone Trade Journal.
Südwestdeutsche Industrie Zeitung, Prussia.
Sydney University Engineering Society.

T

Technische Blätter, Essen-Ruhr, Germany.
Technische Centralanzeiger, Germany.
Tech. du Nord de la France.
Tennessee State Geological Survey.
Tonindustrie Zeitung, Berlin, Germany.
Transvaal Chamber of Mines, Johannesburg.

U

United States Bureau of Mines.
United States Bureau of Standards.
United States Consular Reports.
United States Department of Commerce and Labor.
United States Geological Survey.
University of Illinois.
University of Texas.
University of Texas Mineral Survey.

V

Vancouver, B. C., Chamber of Mines.
Victoria Chamber of Mines, Australia.
Virginia Geological Survey.

W

Washington Academy of Sciences.
West Australian Mining, Building & Engineering Journal, Kalgoorlie.
West of Scotland Iron & Steel Institute.
West Virginia Geological Survey.
West Virginia Mining Association.
Western Australia Department of Mines.
Western Australia Geological Survey.
Western Australia Institution of Engineers.
Western Chemist & Metallurgist.
Western Engineering.
Western Society of Engineers.
Wisconsin Engineer.
Wisconsin Geological & Natural History Survey.
Wisconsin University.
Wood Preservers' Association.
Wyoming Geological Survey.

Y

Yale Scientific Monthly.

Z

Zeitschrift der Oberschlesischen Berg & Hüttenmannischen Verein, Germany.
Zeitschrift des Internationalen Vereines der Bohringenieure & Bohrtechniker, Austria.
Zeitschrift des Zentral Verbandes der Bergbau Betriebsleiter, Bohemia.
Zeitschrift für Bergrecht, Germany.
Zeitschrift für das gesamte Schiess & Sprengstoffwesen, Germany.
Zeitschrift für des Berg, Hütten & Salinenwesen in preussischen Staate, Germany.
Zeitschrift für Elektrochemie, Germany.
Zeitschrift für praktische Geologie, Germany.
Zeitschrift für Schiess & Sprengstoffw. Germany.
Zentral-Blatt Kunstdünger Industrie, Germany.

Explanations and Abbreviations

The entries show:

(1) The author of the article.

(2) A dash if the name is not apparent.

(3) The title, in italics, of the article or book. Titles in foreign languages are ordinarily followed by a translation or explanation in English.

(4) When the original title is insufficient a brief amplification is added. This addition is in brackets.

(5) The journal in which the article appeared; also the date of issue, and the page on which the article begins.

(6) Approximate number of words. Illustrated articles are indicated by an asterisk (*).

(7) The price. Articles mentioned will be supplied to subscribers of Mining and Engineering World and others at the prices quoted. Two-cent postage stamps will be accepted on orders less than $1. Subscribers will be allowed a discount of 5 cts. if the price of the article exceeds 50 cts.

NOTE.—When there is more than one author to an article, only the first named appears in alphabetical arrangement, the others appearing, however, on the page or pages designated in author's index.

Subjoined is a list of the commoner abbreviations found in this work. They are used chiefly in the names of periodicals, and of associations. The abbreviations will be found easily intelligible at sight, and are what they purport to be—self-explanatory abbreviations, not symbols.

Abst.—Abstract.
Acad.—Academy; Académie; Accademia.
Adv.—Advance.
Afr.—Africa; African.
Akad.—Akademie.
Allgm.—Allgemeine.
Amer.—American.
A. I. M. E.—American Institute Mg. Eng.
Archts.—Architects.
Assn.—Association.
Ber.—Berichte.
Bol.—Boletin; Boletim; Bollettino.
Bull.—Bulletin.
Bur.—Bureau.
Centralbl.—Centralblatt.
C-R.—Compte-Rendu; Resoconti.
Chap.—Chapter.
Chem.—Chemical.
Chemy.—Chemistry.
Coll.—College.
Colly.—Colliery.
Cong.—Congress.
Conv.—Convention.
d.—des (French and German).
Dept.—Department.
Deu.—Deutsche, etc.
Econ.—Economic.
Ed.—Editorial.
Elect.—Electrical.
Engg.—Engineering.
Engr.—Engineer.
Engrs.—Engineers.
Ext.—Extract.
f.—for; für.
Gaz.—Gazette.
Geol.—Geology.
Geolog.—Geological.
Ges.—Gesellschaft.
Govt.—Government.
Hüttenm.—Hüttenmännische.
Ind.—Industrial; Industriel; Industrielle.
Ingr.—Ingenieure, Ingenieros.
Inst.—Institute; Institut; Instituto.
Instn.—Institution.
Intl.—International.
Jahresber.—Jahresbericht.
Jahrb.—Jahrbuch.
Jnl.—Journal.
Mag.—Magazine.
Mech.—Mechanical.
Met.—Metallurgy.
Metl.—Metallurgical.
Mex.—Mexican.
Mfrs.—Manufacturers.
Mg.—Mining.
Min.—Mineral.
Mittlngn.—Mitteilungen.
Oestr.—Oesterreichische; Oesterreich.
Proc.—Proceedings.
Quart.—Quarterly.
Rec.—Record.
Rept.—Report.
Res.—Resources.
Rev.—Review; Revue; Revista.
Sci.—Science; Sciences.
Scient.—Scientific.
Soc.—Society; Société; Società.
Suppl.—Supplement; Supplementary.
Surv.—Survey.
Tech.—Technology.
Trans.—Transactions.
Ver.—Verein.
Verb.—Verband.
Verh.—Verhandlungen.
Univ.—University.
Zentralbl.—Zentralblatt.
Ztg.—Zeitung.
Zts.—Zeitschrift.

PART I.

GEOLOGY AND MINERALOGY.

CHAPTER I.

MINING GEOLOGY, ORE GENESIS AND MINERALOGY.

GEOLOGY.

Adair, James B.—*The Oil Field of Washington.*—Al. & N. W. Mg. Jnl. July 1914; p 141; 1800 w*; 30c.

Allen, R. C.—*Correlation and Structure of the Pre-Cambrian Formations of the Gwinn Iron-Bearing District of Michigan.*—Jnl. Geol. Sept.-Oct. 1914; p 560; 14 pp*; 75c.

Allen, R. C.—*Extension of the Menominee Iron Range.*—Mg. & Eng. World Oct. 3 1914; p 625; 1000 w*; 10c.

Allen, R. C., and Barrett, L. P.—*Evidence of the Middle-Upper Huronian Unconformity in the Quartzite Hills at Little Lake, Michigan.*—Jnl. Geol. Sept.-Oct. 1914; p 574; 7 pp*; 75c.

Arber, Newell E. A.—*Geology of the Kent Coal Field, England.* (Paper read before Inst. of Mg. Engrs. London).—Colly. Guard. June 5 1914; 2 pp*; June 12 1914; p 1314; 2 pp*; 70c. I. & C. Tr. Rev. June 5 1914; p 855; 12,000 w*; 35c.

Argall, Phillip.—*Siderite and Sulphides in Leadville Ore Deposits.*—M. & S. P. July 25 1914; p 128; 5000 w*; 20c.

Ball, Lionel C.—*The Einasleigh Copper Mine, Queensland.* (Queensland Geol. Surv. Rept.).—Queensland Govt. Mg. Jnl. June 15 1914; p 291; 9 pp*; 35c.

Ball, L. C.—*The Wolfram, Molybdenite and Bismuth Mines of Bamford, North Queensland.* [Describes the geology, ore deposits, mineralogy, mining properties, etc.].—Queensland Govt. Mg. Jnl. Nov. 14 1914; p 575; 7 pp*; 35c.

Ball, Sydney H., and Shaler, Millard K.—*Economic Geology of the Belgian Congo.*—Economic Geol. Oct. 1914; p 605; 58 pp*; 65c.

Ball, Sydney H., and Shaler, Millard K.—*Mineral Resources of the Belgian Congo.*—Mg. Mag. July 1914; p 54; 3000 w*; 50c.

Bancroft, Howland.—*The Ore Deposits of Northeastern Washington, Including a Section on the Republic Mining District.* (By Waldemar Lindgren and Howland Bancroft).—U. S. Geol. Surv., Bull. 550; pp 215*.

Barnett, V. H.—*The Moorcroft Oil Field and the Big Muddy Dome, Wyoming.*—Bull. 581-C, U. S. Geol. Surv.; pp 36*.

Barrell, Joseph.—*Relations of Isostatic Movements to a Sphere of Weakness—the Asthenosphere.*—Jnl. Geol. Oct.-Nov. 1914; p 665; 28 pp*; 75c.

Barrell, Joseph.—*The Strength of the Earth's Crust.*—Jnl. Geol. July-Aug. 1914; p 441; 26 pp*; Sept.-Oct. 1914; p 537; 20 pp*; $1.50.

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PART II.

ORES AND MINERAL PRODUCTS.

METALS AND METAL ORES.

CHAPTER II.

GOLD, SILVER AND PLATINUM.

GOLD

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CHAPTER IV.

Lead, Zinc and Cadmium.

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CHAPTER VI.

Alloys, Antimony, Chromium, Manganese, Molybdenum, Etc.

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CHAPTER VIII.

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NON-METALS.

CHAPTER IX.

Fuels and By-Products.

COAL

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CHAPTER X.

PETROLEUM, NATURAL GAS, ETC.

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PART III.

TECHNOLOGY.

MINES AND MINING (a*).

CHAPTER XIII.

PROSPECTING

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MINES AND MINING (b*).

CHAPTER XIV

TRANSPORT AND HAULAGE

Akin, A. D.—*Heavy Duty Pipe Lines of Small Diameter.* [Treats of the locus of the pipe line, design and kind of pipe, expansion and contraction, lay of pipes, etc.].—Mg. & Eng. World Oct. 3 1914; p 617; 7 pp*; 10c.

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——— *Trade Possibilities in Latin America.* [An editorial review of the possibilities for trade with Latin American countries, with statistics of population, imports, exports, mineral productions, reserves, etc., of the various countries].—M. & S. P. Nov. 21 1914; p 792; 6000 w*; 20c.

——— *Utah Copper Co.'s Operations.* [Abst. from report for quarter ended Sept. 30 1914; p 918; 500 w; 10c.

——— *Utah Ore Production in* 1913 *Shows Gratifying Increase.* [Gives statistics on the production of gold, silver, copper, lead and spelter]. (Abst. report U. S. Geol. Surv.).—Mg. & Eng. World Oct. 24 1914; p 760 ; 1000 w; 10c.

——— *Western Australian Mines.* [Annual report of mines production, 1913].—Mg. Jnl. London Dec. 26 1914; p 1061; 1½ pp; 35c.

——— *West Virginia's Increased Coal Production in* 1913.—Mg. & Eng. World Dec. 12 1914; p 1097; 300 w; 10c.

MILL AND MILLING.

CHAPTER XVI.

SAMPLING

Barbour, Percy E.—*A Home-Made Automatic Sampler.* [Devised by R. C. Coffey of the Uwara mill, Candor, N. C.].—E. & M. J. Oct. 31 1914; p 786; 400 w*; 25c.

Campbell, C. St. G.—*Sampling of the Cobalt Silver Ores.*—Mg. & Eng. World July 11 1914; p 58; 900 w; 10c.

Clevenger, G. H.—*The Mill and Metallurgical Practice of the Nipissing Mining Co., Ltd., Cobalt, Ontario.* (Paper presented at the Salt Lake meeting of A. I. M. E.).—Canadian Mg. Jnl. Aug. 15 1914; p 555; 4 pp; 35c.

Fitch, Edwin O., Jr.—*How Vanadium Affects Pig Iron.*—Iron Tr. Rev. July 9 1914; p 72; 3200 w*; 25c.

Förster, K.—*Probenehmen und Erzresrvenbeurteilung in den Goldfeldern Transvaals.* [Sampling and valuation of ore reserves in the gold fields of the Transvaal].—Metall & Erz 1914 No. 13; p 441; 4800 w*; 50c.

Heron, Charles M.—*Mine Sampling at El Tigre, Mexico.*—E. & M. J. July 28 1914; p 155; 2000 w*; 25c.

Hills, Victor G.—*Notes on Mine Sampling.*—Bull. 29; Canadian Mg. Inst. Sept. 1914; p 59; 13 pp; 35c.

Jennings, Sidney J.—*Large-Scale Sampling.* [Some unusual sampling expedients found necessary by U. S. Smelting Co. in Alaska].—E. & M. J. Dec. 26 1914; p 1138; 400 w; 25c.

Jennings, S. J.—*The Sampling of Low-Grade Ore Deposits.* (Abstr. from Proc. M. & M. Soc.).—Mg. & Eng. World Dec. 12 1914; p 1086; 500 w; 10c.

Lang, Herbert.—*Management of a Country Smelter.*—M. & S. P. Sept. 19 1914; p 440; 3 pp; 20c.

MacFarren, H. W.—*Practical Stamp-Milling and Amalgamation, Third Edition.*—San Francisco: Mining & Scientific Press; 231 pp*; $2; (book).

Oke, A. Livingston.—*Sample Catcher for Backs.*—E. & M. J. Dec. 19 1914; p 1097; 500 w*; 25c.

Pearce, Jackson A.—*Cyanidation of Clear Creek and Gilpin County Sulphides.* [Describes the methods employed at the Argo mill, Colo.].—M. & S. P. Nov. 28 1914; p 833; 3000 w*; 20c.

Robey, Lloyd.—*Methods of Taking Mill-Head Samples.*—M. & S. P. Aug. 1 1914; p 183; 1700 w; 20c.

Roller, Arthur H., and Curran, Henry T.—*Cyaniding Sulphide Ores at the Argo Mill, Idaho Springs, Colo.* [Amalgamation and concentration followed by continuous agitation, continuous decantation in Dorr thickeners, and completion on Portland slime filter].—Mex. Mg. Jnl. Sept. 1914; p 204; 4 pp*; 35c.

Smoot, A. M.—*Sampling Cobalt Silver Ore.* [Communication].—Bull. 29, Canadian Mg. Inst. Sept. 1914; p 30; 12 pp; 35c.

Vail, Richard.—*The El Paso Smelting Works.* [Describes the plant of the Kansas City Smelting & Refining Co.].—E. & M. J. Sept. 12 1914; p 465; 4 pp*; Sept. 19 1914; p 515; 4 pp*; 50c.

——— *Handbook of Milling Details.* (Compiled from the Engineering & Mining Journal).—New York: McGraw-Hill Book Co.; pp 425*; $4; (book).

——— *Murray Plant of the American Smelting & Refining Co.* (From pamphlet issued by C. W. Whiting, general manager).—S. L. Mg. Rev. Sept. 30 1914; p 11; 7½ pp*; 35c.

——— *Symposium on Fineness of Grinding.*—Trans. English Ceramic Soc. 1913-14; p 114; pp 14; 65c.

CRUSHING, GRINDING, ETC.

Barbour, Percy E.—*The Uwarra Mill, Candor, N. C.* [Fine grinding is done by rolls and tube mills; process is all-sliming].—E. & M. J. Oct. 24 1914; p 729; 4½ pp*; 25c.

Browne, Kenneth C.—*A Handy Grizzly for Heavy Work.*—E. & M. J. Dec. 12 1914; p 1045; 600 w*; 25c.

Blyth, W. B.—*Hardness of Ores.*—Jnl. Chamb. of Mines W. Aus. Apl. 30 1914; p 88; 2000 w*; 50c.

Blyth, W. B.—*Tube-Mill Practice and the Hardness of Ores.*—M. & S. P. July 18 1914; p 93; 1000 w*; 20c.

Caetani, Gelasio.—*The Design of the Plymouth Mill, California.* [Represents a departure from flow-sheets of the older mills; gives the results which are being obtained by the application of a modern system of classification and other mechanical changes in the established practice].—M. & S. P. Oct. 31 1914; p 670; 10¾ pp*; 20c.

Clevenger, G. H.—*The Mill and Metallurgical Practice of the Nipissing Mining Co., Ltd., Cobalt, Ontario.* (Paper read before the Salt Lake meeting A. I. M. E.).—Canadian Mg. Jnl. Aug. 15 1914; p 555; 4 pp; Sept. 1 1914; p 588; 3 pp; 70c.

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Cropper, Percy M.—*Mining and Milling Methods at the Aurora Con. Mine, Nevada.*—S. L. Mg. Rev. Sept 15 1914; p 11; 2½ pp*; 25c.

Crowell and Murray.—*The Iron Ores of Lake Superior, Second Edition.*—Cleveland, O.: Penton Pub. Co.; pp 262*; $3.50; (book).

Dean, Samuel.—*Shale-Dust Grinding Machines at English Collieries.*—Coal Age Sept. 26 1914; p 495; 1 p*; 20c.

Del Mar, Algernon.—*Steam Stamps from the Gold Miner's Point of View.* [Discusses the efficiency of steam stamps and gravity stamps.—M. & S. P. Oct. 3 1914; p 513; 5 pp*; 20c.

Dorr, J. V. N.—*Grinding Ore for Cyanidation: A Suggested Modification for All-Sliming Practice.* [Discussion of article of same title by W. J. Pentland in Oct. issue of same paper].—Met. & Chem. Eng. Nov. 1914; p 672; 750 w; 35c.

Eye, C. M.—*Development of Gold Milling in the Philippines.*—M. & S. P. Aug. 22 1914; p 287; 4000 w; 20c.

Ferguson, James C. H.—*Steel Roll Shells.* [Treats of the evolution of steel shells for crushing ore, giving data on their composition].—M. & S. P. Nov. 21 1914; p 809; 700 w; 20c.

Foote, Arthur B.—*An Improved Form of Cam for Stamp Mills.*—Bull. 96 Dec. 1914; p 2765; 2 pp*; 35c.

Hardinge, H. W.—*Short Tube Mills.*—M. & S. P. Aug. 8 1914; p 218; 1000 w*; 20c.

Hetzel, F. V.—*Coke Crushers.*—Coal Age July 4 1914; p 29; 900 w*; 20c.

Hough, Ulysses B.—*Improved Ore Feeder.* [Describes the Tulluch feeder]. —M. & S. P. Oct. 10 1914; p 562; 450 w*; 20c.

Hurja, E. E.—*Developments of the Alaska Gold Mines Company.*—M. & S. P. July 18 1914; p 900 w*; 20c.

Huntington, P. S.—*Distributor for Regulation of Feed to Pebble Mills.* [Describes the equipment designed and installed at the test mill of the Inspiration Co.].—E. & M. J. Oct. 31 1914; p 785; 300 w*; 25c.

Kiliani, R. B. T.—*The Incaoro Mill, Bolivia.* [Treats mainly of crushing, amalgamation and milling costs].—M. & S. P. Nov. 1914; p 800; 500 w*; 20c.

King, E. S.—*Pan Grinding; Modern Methods of Appliances.*—Mg. Wld. & Engg. Rec., London, Aug. 15 1914; 1000 w*; 35c.

King, E. S. —*Stamp-Mill Test.* [Describes competitive tests of Californian and Nissen stamps on tin ore].—Mg. Mag. Dec. 1914; p 378; 900 w*; 50c.

Kress, H. H.—*Coal Pulverizing and Mixing Plant.*—Coal Age July 25 1914; p 135; 750 w*; 20c.

Larson, Clarence L.—*The Chiksan Mines, Chosen.*—E. & M. J. Aug. 15 1914; p 309; 4 pp*; 25c.

Lenher, Victor. — *Auto-Reduction in the Precipitation of Metallic Gold.* (Abst. from Jnl. American Chem. Soc.).—M. & S. P. Sept. 12 1914; p 411; 1200 w; 20c.

Liston, John.—*Electricity in Coal Mines.*—Canadian Mg. Jnl. Oct. 1 1914; p 640; 5½ pp*; 35c.

MacFarren, H. W.—*Practical Stamp-Milling and Amalgamation, Third Edition.* —San Francisco: Mining & Scientific Press; 231 pp*; $2; (book).

Marcy, F. E.—*Description of the New Marcy Ball Mill.*—S. L. Mg. Rev. Dec. 15 1914; p 11; 2½ pp*; 25c.

Megraw, Herbert A.—*Cyanide Development at Porcupine, Ontario.*—E. & M. J. Aug. 29 1914; p 385; 2300 w*; 25c.

Mishler, R. T.—*Relation of Feed to Tube-Mill Efficiency.*—E. & M. J. Sept. 12 1914; p 469; 3 pp*; 25c.

Mueller, J. G.—*New Tube-Mill Liner.* [Describes the Globe and Mueller liner]. —M. & S. P. Aug. 15 1914; p 255; 500 w*; 20c.

Mueller, John G.—*Tube Milling at Cobalt.* [Gives result of tests on different kinds of tube mills at the McKinley-Darragh-Savage mill].—E. & M. J. Sept. 26 1914; p 564; 3 pp; 25c.

Parmelee, H. C.—*Cyanide Practice in the Porcupine District, Ontario, Canada.* —Met. & Chem. Eng. Oct. 1914; p 636; 3800 w*; 35c.

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Parsons, A. E.—*Cam-Shaft Damper.*

[Describes a simple contrivance for reducing vibration adopted by the Candor Mines Co., Candor, N. C.].—E. & M. J. Oct. 24 1914; p 743; 300 w*; 25c.

Pentland, W. J.—*Grinding Ore for Cyanidation: A Suggested Modification for All-Sliming Practice.*—Met. & Chem. Eng. Oct. 1914; p 621; 2200 w; 35c.

Pentland, W. J.—*Notes on Tube-Milling in All-Slime Cyanide Practice.*—Met. & Chem. Eng. Dec. 1914; p 750; 2600 w; 35c.

Rideal, Eric K.—*Some Studies on the Reduction of Uranium Oxide.*—Jnl. Soc. Chem. Ind. July 15 1914; p 673; 3 pp*; 65c.

Roesler, H. A.—*Crushing Conditions for Coarse Concentration.* [Gives results of two mills operating on a very coarsely disseminated zinc ore in the Wisconsin zinc district].—Mex. Mg. Jnl. Nov. 1914; p 293; 1 p; 35c.

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Roller, A. H., and Curran, H. T.—*Ore Treatment at the Argo Mill, Idaho Springs, Colo.*—E. & M. J. July 4 1914; p 1; 2500 w*; 25c.

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Sherman, F. W.—*The New Daly West Mill, Utah.* (Abst. from Park City, Utah, Record).—M. & S. P. Sept. 5 1914; p 370; 1 p; 20c.

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Smith, Lyon.—*Operation of the Pittsburgh-Silver Peak Mill, Nevada.* [Process involves crushing to 35 mesh, plate amalgamation and regrinding of coarser sands, settling and sizing cones; sand leached and slimes treated in Merrill slimes presses. Zinc-dust precipitation].—E. & M. J. Oct. 3 1914; p 595; 4½ pp; 25c.

Speak, J. S.—*Measurement of Energy Consumed in Crushing.* (Abst. of paper read before I. M. & M. London).—Mg. & Eng. World July 11 1914; p 51; 1200 w*; 10c.

Speak, S. J.—*The Application of Kick's Law to the Measurement of Energy Consumed in Crushing.* (Paper presented before Inst. of Mg. & Met..).—Canadian Mg. Jnl. Sept. 15 1914; p 623; 1 p; 35c.

Stadler, H.—*The Law of Crushing.* [Compares and discusses Rittinger's and Kick's laws].—E. & M. J. Nov. 21 1914; p 905; 2300 w*; Nov. 28; p 945; 3000 w*; 50c.

Stanley, G. H.—*The Laws of Crushing.* [Presidential address before Chem. Met. & Mg. Soc. of S. Afr.].—Jnl. of Society Aug. 1914; p 24; 11 pp*; 75c.

Starck, C. J.—*Reduction of Titaniferous Ores.* [Details of experiments at Port Henry to utilize vast deposits of magnetic ores which are high in titanium].—Ir. Tr. Rev. Oct. 15 1914; p 721; 6 pp*; 25c.

Summerhayes, Maurice. — *Continuous Decantation at the Porcupine Crown Mines.*—M. & S. P. July 18 1914; p 88; 2700 w*; 20c.

Terry, J. T.—*Cyaniding Tailing in the Willow Creek District, Alaska.* [Details are given of plant where tailing composed of from 40 to 50 mesh and fairly free from sand, is being treated].—M. & S. P. Dec. 26 1914; p 989; 1½ pp*; 20c.

Tupper, C. A.—*A Review of Recent Progress in Japanese Mines.* [Devoted principally to the properties of the Mitsu Bishi Co. and the Mitsui Mining Co.].—Mg. & Eng. World Oct. 17 1914; p 707; 7 pp*; 10c.

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——— *Chloridizing Ores at Silver City, Utah.* [Describes the process used at the Knight-Christensen mill].—Met. & Chem. Eng. Dec. 1914; p 757; 1600 w*; 35c.

——— *Cyanidation at Shafter, Texas.* [Describes the modern concentration mill of the Presidio Mining Co., built to replace pan-amalgamation and to treat ore averaging about 20 ozs. silver].—M. & S. P. Oct. 24 1914; p 643; 3 pp; 20c.

——— *Details of Mining and Milling Costs of the Tigre Mining Co., Mexico.* (Abstr. from the company's annual report).—E. & M. J. Dec. 12 1914; p 1047; 600 w; 25c.

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——— *Large vs. Small Stamps.* [Editorial].—M. & S. P. Oct. 3 1914; p 511; 1000 w; 20c.

——— *Murray Plant of the American Smelting & Refining Co.* (from pamphlet issued by C. W. Whiting, general manager).—S. L. Mg. Rev. Sept. 30 1914; p 11; 7½ pp*; 35c.

——— *New Arrangement of the Dome Mill at South Porcupine, Ontario.* [Designed by the Merrill Metallurgical Co.]. —E. & M. J. Sept. 19 1914; p 527; 2 pp*; 25c.

——— *Operations of the Utah Copper Co.*—S. L. Mg. Jnl. July 30 1914; p 12; 8 pp*; 25c.

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——— *Recent Progress in Rand Metallurgical Practice.*—S. A. Mg. Jnl. June 20 1914; p 446; 1100 w; 35c.

——— *Small Mill and Reduction Plant for Mill Tests.* [Describes the Moyle rapid-drop portable stamp mill for free-milling and concentrating ores, designed for small-scale work by prospectors, mine owners, etc.].—Mg. & Eng. World Dec. 19 1914; p 1135; 650 w*; 10c.

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——— *Tin Dressing Plant at the Leeuwpoort Mine, South Africa.*—S. A. Mg. Jnl. July 4 1914; p 493; 1100 w; 35c.

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Barbour, Percy E.—*Hydraulic Cone Classifier.* [Installation by the Goldfield Con. Co.].—E. & M. J. Sept. 5 1914; p 438; 400 w*; 25c.

Barbour, Percy E.—*Some Screen Analyses from Tonopah, Nevada.*—E. & M. J. July 25 1914; p 166; 200 w; 25c.

Becket, F. M.—*Method of Treating Tungsten Ores.* [Patent description].—E. & M. J. July 4 1914; p 16; 500 w; 25c.

Black, William Spence.—*A Rapid Method for Washing Gold Beads.* [Method consists in drawing off the acid and wash water by means of a small suction pump with a connection of flexible rubber tubing ending in a glass tip.—E. & M. J. Dec. 26 1914; p 1141; 1¼ pp*; 25c.

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Clevenger, G. H.; Young, H. W.; Turner, T. N.—*Pulp Constants.* [Specific gravity of the solutions used in making up a pulp charge has an appreciable effect on the tonnage calculations, and may introduce serious error. Tables have been calculated so as to facilitate tonnage calculations for pulps of all usual solution and dry slimes specific gravity.—E. & M. J. Dec. 19 1914; p 1079; 16 pp*: 25c.

Close, Frederick.—*Impressions of Juneau, Alaska.*—Mg. Mag. Aug. 1914; p 121; 2000 w*; 50c.

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Comstock, H.—*Concentrating at Barton Hill Iron Mine, New York.*—Ir. Tr. Rev. Aug. 6 1914; p 253; 2600 w*; 25c.

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Eye, C. M.—*Development of Gold Milling in the Philippines.*—M. & S. P. Aug. 22 1914; p 287; 4000 w; 20c.

Fischer, Siegfried.—*The Carnotite Industry.* [In addition to a general description of the industry method for the extraction of the values from the ores is given: (a) Extraction of the values; (2)

separation of the uranium and vanadium; (3) obtaining of the radium from the vanadium].—Paper read at Denver meeting Am. Elchem. Soc. 1913; pp 15*; 35c.

Freise, Friedr. — *Experimentaluntersuchungen über Aufbereitung von Monazit und Wolframit.* [Experimental investigations on the treatment of monazite and wolframite].—Metall & Erz 1914 No. 16; p 575; 4000 w; No. 17; p 587; 6500 w; $1.

Gould, Ralph A.—*Report of the Selby Smelter Commission.* — Mg. & Eng. World Dec. 12 1914; p 1081; 5½ pp*; 10c.

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Mewes, W.—*The Magnetic Separation of Minerals.*—Mg. & Engg. Rev. June 5 1914; p 274; 2½ pp*; 35c.

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Morrison, H. A., and Thomson, H. G. —*Operation of the Oliver Filter in the Globe Mill, Dedrick, California.* [A study of the methods of operating a continuous drum filter with comparisons of experience at the Globe mill, with that in other plants].—M. & S. P. Oct. 10 1914; p 554; 5 pp*; 20c.

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CHEMISTRY AND ASSAYING.

CHAPTER XVII.

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METALLURGY.

CHAPTER XVIII.

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——— *Operations at Anaconda Metallurgical Plants.*—Mg. & Eng. World Aug. 8 1914; p 244; 600 w; 10c.

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——— *Progress in the Metallurgy of Zinc, Copper, Lead, Gold and Silver in* 1913. (Abst. from Metall & Erz June 20 1914); p 553; 1000 w; June 20 1914; p 587; 650 w; 70c.

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——— *The New Treatment Plant at the Mount Morgan Mine.* [Notes the many improvements that have been made in the past few years at this property]. —Queensland Govt. Mg. Jnl. Nov. 14 1914; p 565; 4 pp*; 35c.

POWER AND MACHINERY.*

CHAPTER XIX.

ELECTRICITY

In Mines

Anderson, A. R.—*Interpole Motors for Mine Locomotives.*—Coal Age Sept. 26 1914; p 511; 1 p; 20c.

Barry, J. C.—*Commutating Poles for Mine Locomotives.* [Presents the factors governing motor design and performance; also reasons for and effect of commutating poles upon the magnetic field of the machine and upon the commutation].—Coal Age Oct. 10 1914; p 588; 2½ pp*; 20c.

Belden, Sanford B.—*Recent Developments in the Design of Jeffrey Electric Locomotives and Coal-Cutting Machines.*—Bull. 90 A. I. M. E. June 1914; p 977; 28 pp*; 50c.

Booker, H.—*Electric Substations in Mines.*—Iron Tr. Rev. July 9 1914; p 74; 1800 w; 25c.

Brown, H. V.—*The Development of the Ebensburg Coal Co. Mines, Pa.* [Treats of haulage, car transfer, hoisting, etc.].—Coal Age Dec. 5 1914; p 904; 1000 w*; 20c.

Bruns, H.—*Das Abteufen des Schachtes Ickern II mit Hilfe elektrischer Föderung.* [The sinking of the Ickern II shaft with the aid of electric hoisting].—Glückauf 1914 No. 28; p 1119; 2000 w*; 50c.

Burroughs, Wilbur Greeley.—*The High Shaft Mine at Steubenville, Ohio.*—Colly. Engr. Sept. 1914; p 69; 1800 w*; 35c.

Brunton, David W., and Davis, John A.—*Modern Tunneling with Special Reference to Mine and Water-Supply Tunnels, First Edition.*—New York; John Wiley & Sons; pp 450*; $3.50; (book).

Clark, H. H.—*Permissible Electric Lamps for Miners.*—Tech. Paper 75, U. S. Bureau of Mines; pp 21*.

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Cullinan, E. P.—*Electrolytic Hoist Control.* [Description of a method of flexible control of electric mine hoists]. (Paper read before the Nevada Ind. Safety Assn.).—Jnl. E P. & B. Sept. 26 1914; p 292; 850 w; 35c.

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Easton, Wm. H.—*A Two-Speed Alternating-Current Motor for Mine Ventilation.*—Coal Age Sept. 5 1914; p 374; 1½ pp*; 20c.

Freyberg, M.—*Ueber neuere Transportmittel in Chlorkalium und Sulfatfabriken.* [On recent means of transport in potassium-chloride and sulphate works].—Kali 1913 No. 13; p 309; 4500 w*; 35c.

Hailwood, E. A.—*Miners' Oil Lamps vs. Miners' Electric Lamps.* (Paper read before the Cambuslang School, Scotland).—I. & C. Tr. Rev. London July 10 1914; p 46; 1 p; 35c.

Hale, Robert M.—*Electricity in a Coal-Handling Plant.* [Describes the electrical features of the Issaquah & Superior Coal Co.'s plant, Washington, and gives interesting details relative to the conveying and handling by means of electrically driven machinery].—El. Rev. W. Elect. Dec. 19 1914; p 1165; 3¼ pp*; 25c.

Hall, R. Dawson.—*Storage-Battery Locomotives at the Grant Mine, New Goschen, Ind.*—Coal Age Oct. 10 1914; p 576; 3⅓ pp*; 20c.

Hellmund, R. E., and Clark, W. A.—*Commutating-Pole Motors for Mine Locomotives.* [Advocates their installation].—Coal Age Sept. 19 1914; p 467; 3½ pp*; 20c.

Heym. — *Ein drahtloses Grubentelephon.* [A wireless mine telephone].—Kali, Erz & Kohle 1914 No. 19; p 663; 600 w; 35c.

Holiday, Roslyn.—*The Economic Justification for the Use of Electric Power in Collieries.* (Presidential address de-

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Note.—For drills, pumps, fans, haulage and winding engines, dredges, excavators, crushers, separators, conveyors, transportation, machinery, etc., see respectively "Drilling and Boring," "Pumping," "Ventilation" and other appropriate headings in "Mine and Mining," "Mill and Milling," and "Miscellaneous."

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Ives, L. E.—*Electric Shovels in Lapland.* [Brief description of Luossavaara-Kirunavaara iron mine, north of the Arctic circle; equipment includes electric shovel of the Bucyrus make].—E. & M. J. Oct. 31 1914; p 768; 2¾ pp*; 25c.

Kelley, Wm., and Armstrong, F. E.—*Use of Electricity at the Penn and Republic Mines, Michigan.* [Electricity was introduced at these mines in 1907 for pumping, hoisting, and compressing air]. (Paper read before L. S. M. I.; Marquette meeting).—Mg. & Eng. World Oct. 10 1914; p 685; 6 pp*; Oct. 17 1914; p 715; 5 pp*; 20c.

Kellogg, L. O.—*Electricity in American Metal Mining.* [Discusses lighting, signaling, telephoning and blasting].—Engg. Mag. Aug. 1914; p 704; 11 pp*; 35c.

Kellogg, L. C.—*Electricity in American Mining.* [Review of present status of electrical apparatus in standard practice, devoted to hoisting, haulage, pumping and air compressing].—Engg. Mag. July 1914; p 533; 19 pp*; 35c.

King, S. B.—*Some Recent Developments in Electric Coal-Mining Machines.* (Paper read before New York meeting A. I. M. E.).—Bull. 90 A. I. M. E. June 1914; p 957; 20 pp*; 50c.

Kneeland, Frank H.—*A New Type of Electric Locomotive.* [Describes an electric locomotive based on the principle of the induction motor, the stationary element being between the rails of the track, and the movable element being beneath the truck of a car traveling thereon].—Coal Age Dec. 5 1914; p 909; 700 w*; 20c.

Le Fevre, S.—*Application of Electricity to Mines and Mills of Witherbee, Sherman & Co., Inc., Mineville, N. Y.*—Bull. 90 A. I. M. E. June 1914; p 1143; 15 pp*; 50c.

Liston, John.—*Electricity in Coal Mines.*—Canadian Mg. Jnl. Oct. 1 1914; p 640; 5½ pp*; 35c.

Lof, Eric A.—*Electricity in Coal Mining.* [Describes the principal applications of electric power in coal-producing work, including generation, transmission and distribution, haulage, hoisting, pumping, ventilation, drilling, coal cutting, etc.].—Coal Age Dec. 5 1914; p 894; 6200 w*; 20c.

Maurice, W.—*Maintenance of Miners' Electric Safety Lamps.* (Paper read before South Staffordshire Branch Assn. Mg. Elec. Engrs).—I. & C. Tr. Rev. Nov. 13 1914; p 610; 1½ pp; 35c.

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McCune, James.—*A Good Signal System.*—Coal Age July 25 1914; p 149; 450 w*; 20c.

Means, C. M.—*Cables in Bore Holes.*—Coal Age Oct. 3 1914; p 537; 800 w; 20c.

Nelson, T. J.—*The Prevention of Electrical Accidents in Coal Mines.* (Paper read before Assn. of Mg. & Elec. Engrs., So. Wales Branch).—Ir. & C. Tr. Rev. London Dec. 4 1914; p 701; 3½ pp*; 35c.

Peake, H. G.—*Building a Placer Mining Dredge with Electric Power Plant in Portugal.* [Describes an American type, English built, to handle tin placer ground].—M. & S. P. Oct. 3 1914; p 522; 3 pp*; 20c.

Perkins, Frank C.—*An Electric Mining Switch Pillar of English Design.*—Mg. & Eng. World Sept. 12 1914; p 470; 700 w*; 10c.

Perrin, G. L.—*Proper Voltage for Underground Haulage.* (Abst. of paper read before Nevada Safety Ind. Conf.).—Mg. & Eng. World July 4 1914; p 17; 500 w*; 10c.

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Ralph, George J.—*A Portable Electrical Gas-Detecting Device for Use with Miners' Lamps.* (Paper read before N. of Engl. Inst. Mg. & Mech. Engrs.).—I. & C. Tr. Rev. London Oct. 16 1914; p 475; 1¼ pp*; 35c. Colly. Guard. Oct. 16 1914; p 833; 1½ pp*; 35c.

Rice, George S.—*International Conference of Mine-Experiment Stations, Pittsburgh, Pa., Sept.* 14-21, 1912.—U. S. Bureau of Mines, Bull. 82; pp 99*.

Rice, George S., and Clark, H. H.—*Firing Shots in Coal Mining Electrically from the Outside.* (Abst. of paper read before Pittsburgh meeting A. I. M. E.).—Coal Trade Bull. Oct. 15 1914; p 27; 5¾ pp; 25c; Coal Age Dec. 12 1914; p 940; 3800 w; 20c.

Rosenblatt, Girard. — *Application of Electric Motors to Gold Dredges.* [Abst. of paper read before Spokane meeting of Elect. Engrs., treating of the use of electric powers in gold dredging].—Mg. & Eng. World Dec. 26 1914; p 1169; 3500 w*; 10c.

Ryba, Gustav.—*Wolfs elektrische Grubenlampe mit alkalischem Akkumulator.* [Wolf's electric mine lamp with alkaline accumulator].—Zts. Zentral Verbd. Bergbau Betriebsl. 1914 No. 11; p 281; 3000 w*; No. 12; p 312; 3000 w*; 70c.

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Schwarzenauer, W. — *Untersuchungen auf Wassergefahr in Grubenbauen mittels elektrischer Schwingungen.* [Investigation of water dangers in mines by means of electrical oscillations].—Kali 1914 No. 12; p 285; 1000 w; 35c.

Schulte, F.—*The Victoria Coal Mine at Lunen, Germany.* [A detailed description of one of the most modern of European mines; translated from Glückauf].—Coal Age Oct. 10 1914; p 583;

Scott, E. Kilburn.—*Switch Gear for Mines.* (Paper read before Midland Inst. Mg. Civil & Mech. Engrs.).—I. & C. Tr. Rev. London July 24 1914; p 129; 2½ pp*; 35c.

Shearer, David R.—*Electricity in Coal Mining.*—Coal Age June 13 1914; p 966; 1800 w; June 20 1914; p 1001; 2300 w; July 11 1914; p 60; 2300 w*; July 18 1914; p 105; 850 w*; July 25 1914; p 147; 1200 w; $1.

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Shive, Stewart S.—*Storage-Battery Locomotives.* [Describes storage-battery mine locomotives, studies their performance and analyzes the conditions under which a storage-battery locomotive may be profitably installed].—Colly. Engr. Oct. 1914; p 121; 5500 w*; 35c.

Stone, S. R.—*Modern Power Plant for Coal Mines.*—Mg. & Eng. World July 4 1914; p 19; 1000 w; 10c.

Stone, F. L.—*Notes on Electric Shaft Hoisting.* (Abst. from General Electric Review).—Mech. Wld. London Sept. 18 1914; p 135; 1 p*; 35c.

Thornton, W. M.—*The Limiting Conditions for the Safe Use of Electricity in Coal Mines.* (Abst. of paper read before Engg. Sec. British Assn. in Australia).—Jnl. Royal Soc. of Arts Sept. 25 1914; p 927; 500 w; 35c; Colly. Guard. Aug. 21 1914; p 413; 2 pp*; 35c; Ir. & C. Tr. Rev. Aug. 21 1914; p 255; 2 pp; 35c.

Tupper, C. A.—*The Operation of Rotary Converters at Coal Mines.*—Coal Age Sept. 26 1914; p 506; 5 pp*; 20c.

Turnbull, J. Armstrong.—*The Requirements for Economical Winding.* [Describes the various hoisting equipment in South African mines].—S. Afr. Engg. Sept. 1914; p 45; 3⅓ pp*; 35c.

Watts, Thomas G.—*Investigations Into a System of Electric Bell Signaling for Use in Collieries.* (Paper read before So. Wales Inst. of Engrs.).—Colly. Guard. London Dec. 4 1914; p 1170; 1⅔ pp*; 35c.

Webber, Cornelius.—*The Electrification of the Cottonwood Coal Co.'s Mines, Montana.*—Coal Age Sept. 19 1914; p 454; 2 pp*; 20c.

Wolf, W.—*Neuere Signaleinrichtungen in Bergwerken.* [Recent signaling appliances in mines].—Kali 1914 No. 12; p 286; 3000 w*; 35c.

——— *A Firedamp Indicator for Miner's Electric Lamp.*—Colly. Engr. Nov. 1914; p 208; 300 w*; 35c.

——— *A New Core Remover for Diamond Drilling.* [Is designed to remove the core without pulling the rods or discontinuing drilling].—Mg. & Eng. World Oct. 31 1914; p 811; 1½ pp*; 10c.

——— *An Electric Air-Hammer Drill.*—Engg. News July 30 1914; p 249; 500 w*; 25c.

——— *Approved Electric Safety Lamps.* [A detailed description of a number of electric lamps that have been approved for use in English coal mines] (Abst. from Coll. Guard.).—Coll. Engr. Aug. 1914; p 27; 2300 w*; 35c.

——— *Coal Mine Operated on Real "Safety First" Idea.* [Describes the interesting equipment of the Wisconsin Steel Co.'s mine at Benham, Ky.].—Bl. Diam. Oct. 10 1914; p 282; 2 pp*; 30c.

——— *Electrical Equipment of Sneyd Colliery, Burslem, England.* [Treats of the development from a lighting plant to complete electric operation].—Colly. Engr. Oct. 1914; p 137; 1400 w*; 35c.

——— *Electric Hoisting at the Gladstone Mine, California.*—Mg. & Eng. World July 4 1914; p 13; 750 w*; 10c.

——— *Electric Shifting Locomotive on a Cleveland Ore Dock.*—Engg. News Sept. 3 1914; p 479; 500 w*; 25c.

——— *Electric Power v. Mules in Coal Mines.* [Discusses the merits of the two].—M. & S. P. Nov. 7 1914; p 728; 300 w; 20c.

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PART III.

MISCELLANEOUS.*

CHAPTER XX.

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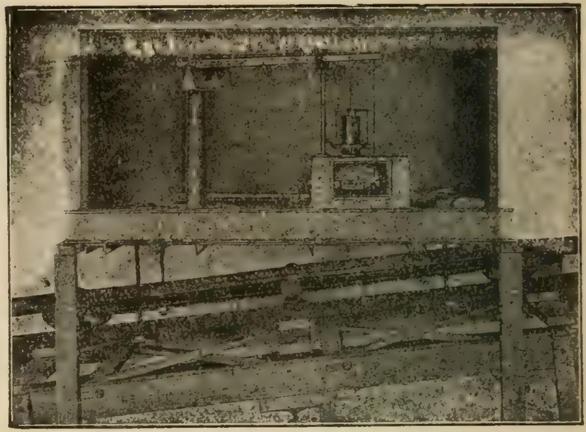
The Merrick Weightometer



successfully solves the problem of obtaining an accurate record of the weight of material carried on belt, bucket or pan conveyors, cable railways and overhead transporters. It thus provides the information essential to efficient management and economical production.

Your conveyor system may be bringing in raw material or supplies, loading outgoing material, or transferring material from process to process. Whatever its function, a daily record of weights handled is the only infallible method of detecting particular points of under-production, however caused.

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The accuracy of records furnished by the Weightometer is proved by tests made by customers, by the British and Canadian Governments, and by the Bureau of Standards of the United States. The results are more accurate than those obtained by hand weighing and are secured without interrupting the flow of material, without breakage and the consequent creation of dust.

Magnetic Counters can be furnished which will duplicate the reading of the scale register in an office or other distant points.

The important advantages of the Merrick Weightometer are:—easy installation; automatic operation; no expense for attendance; durability; simplicity; sheet iron enclosure for all working parts, thereby eliminating exposure to dust and interference by tampering; weighing without interruption of conveyor service, and a high degree of accuracy whether the load be intermittent or uniform.

A complete description with illustrations sent on request.

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